

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims

1-7. (Canceled):

8. (Currently Amended): A method for producing O-glycan α 2,8-sialyltransferase, comprising

in vitro culturing ~~a transformant of isolated host cells~~ transformed with an expression vector comprising ~~either of the following nucleotide sequences:~~

~~(1) a nucleotide sequence corresponding to a portion between nucleotide 77 and nucleotide 1270 of a nucleotide sequence shown in SEQ ID NO: 2; and~~

~~(2) a nucleotide sequence corresponding to a portion between nucleotide 92 and nucleotide 1285 of a nucleotide sequence shown in SEQ ID NO: 4; and~~

collecting O-glycan α 2,8-sialyltransferase from the culture.

9-14. (Canceled):

15. (Currently Amended): A method for producing a protein comprising an active domain of O-glycan α 2,8-sialyltransferase comprising in vitro culturing a ~~transformant of isolated host cells~~ transformed with an expression vector comprising a gene encoding a protein comprising amino acids 26 to 398 of the amino acid sequence shown in SEQ ID NO: 1 ~~according to claim 9;~~ and collecting the protein from the culture.

16-30. (Canceled):

31. (New): A method of selectively incorporating sialic acid into O-glycans in a mammal, comprising administering an effective amount of a O-glycan α 2,8-sialyltransferase or a protein comprising an active domain of O-glycan α 2,8-sialyltransferase, wherein the O-glycan α 2,8-sialyltransferase has substrate specificity towards glycoconjugates with a Sia α 2,3(6)Gal structure (Sia represents sialic acid and Gal represents galactose at the terminus thereof), and wherein the O-glycan α 2,8-sialyltransferase has the amino acid sequence shown in SEQ ID NO: 1 or comprises the amino acids 26 to 398 of SEQ ID NO: 1 .

32 (New): The method of claim 31, used for the treatment of a hereditary disease caused by a deficiency of sugar chains.

33 (New): The method of claim 31, used to suppress the growth of cancer metastasis.

34 (New): The method of claim 31, used to study an influence of a physiological activity by combining sialic acid with at least one pharmaceutically active ingredient.